INTERACTIVE WHITEBOARDS

Interactive whiteboards is a broad term for generally speaking a projector displaying an image onto a touch sensitive screen. This is in most classrooms today. It can have quite a few variations and a lot of new ideas have surfaced recently. We will go through the various options open to you in choosing the right solutions for you and your situation.

Types of Whiteboard

For this first section we will look into various aspects of an Interactive Whiteboard (From here we will refer to them as IWB's) and give a short description of each. IWB's are a huge field and we will try and fill you in as quickly as possible. There are 3 main companies supplying them too - Smart do the Smartboard range - RM do the RM Classboard range and Promethean do ActivBoard. There is little to choose between them in truth. They all do the same thing - the RM and Promethean boards require the use of their own pen to write on the board - which is useful to avoid accidental presses on the board as you are writing and also the board is very tough. While the smartboard is pressure sensitive so you can use your fingers, so while it is a little more user friendly - the board then is a little more open to damage. In the end it is probably best just to go for the brand that you already have throughout the school to maintain a conformity - it would be a pain to have all 3 types of board and have to train all teachers on all boards. Also it is much harder to have set pages to display if you have to create 3 of everything.

Another deciding factor to consider if you have asbestos ceilings is that smartboard and promethean do a range of boards that incorporate the projector - so everything is wall mounted in one unit. This is also very useful for teachers as when they are facing the class the glare from the projector is greatly reduced because of the angle of the projector.
However the downside of these projectors is you cannot mount them very low for younger ones as the arm that comes out is fixed and adults will walk into the arm !

On the subject of mounting them there is also 3 options. First is the normal wall mount option - most used of all - then there is a trolley mounted version - useful for halls - and finally there is a sliding wall option. This is great for a room that has a wide range of ages as

the board moves up and down on a bracket very easily. This type of board is limited to the smartboard with built in arm.

One final note about interactive whiteboards - you should consider if you actually need it to be interactive - i know that sounds a strange question - but areas like a hall normally just need a screen instead. Most things shown in a hall are usually just for information and do not need to be interacted with. Also areas like an ICT suite is another area that doesn't always need to be interactive.

Types of Projector

The projector is without doubt the most important component in an IWB as it is the item that displays the image on the screen. If you get buy the wrong one it will not only mean the pupils will struggle to read the display but it will cost you too much in the long run. There is a huge range to choose from but it can be simplified down to a few categories.

It is important to consider the use of your projector. The intensity or brightness of a projector is measured in lumens. In rooms receiving bright or direct sunlight a more powerful (more lumens) projector will be require. The larger the screen to project onto or the brighter the room, the greater lumens required.

- Well shaded rooms may only a projector with 1500-2000 lumens.
- Bright rooms or rooms with minimal shade will require 2000+ lumens.
- Halls may require 2500+ lumens.

Please note these figures are meant as a rough guide.

Another thing to bear in mind with projectors is how they are mounted.

- Ceiling mounted – projectors are mounted vertically to the ceiling via a bracket, possibly extended by a pole (from a high ceiling). Brackets can be projector-specific or even ‘universal’
- Boom mounted – instead of a ceiling mounted, a horizontal wall-mounted boom can carry the projector. There is also an option to allow the boom and projector to swing back to the wall for storage and security.
- Short throw – this type is often mounted directly to the wall. The image from the projector is at a much greater angle which does not ‘blind’ the user such as a Ceiling Mounted Projector.
- Integrated – some IWBs have integral projectors connected via a short horizontal boom.

Security is also a issue with projectors. Here are some popular choices.

- Cages - most projectors are able to be caged for security purposes. It also offers a level of protection from moving objects such as balls in the hall. However, cages restrict access thus making filter cleaning and lamp changes more time consuming.
- Motion alarms act as a deterrent to thieves and activate a loud siren when a projector is disturbed. They are bonded to the projector or can be integral or built-in.
- Education projectors – these are often brightly coloured as to easily identify them so. As a security precaution the controls are placed on the remote control only and removed from the body of the projector itself. The remote control is then kept secure, once again is an effective theft deterrent. A PIN code often secures the use of the unit. It is advisable that PIN codes are kept separate from the projector and the remote control.
- It is advisable to ensure rooms are also alarmed with a motion sensors (PIR)

Projector Lamps:

Lamps are a consumable part of any projector and have a limited lifespan with decreasing performance (the brightness reduces). Lamps are often specific to each model of projector.

- It is recommended that the same models of projector are bought in batches. This allows for easy lamp stocking as spares.
- Keep at least one spare lamp for every type of projector.
- Older projectors (3-5years) that are lacking in performance (brightness) don't always benefit greatly from a lamp replacement. It may be more economical to replace the projector entirely. New projectors often come with free lamp replacement schemes and longer warrantees. Modern projectors are usually greater in lumens.

Projector Maintenance:

Regular user maintenance will significantly increase the life of the projector and lamp

- Clean the filter(s) very regularly. This may be monthly or less frequently depending on the environment. Dust and particles will build up in filters, as this occurs the projector will get hotter. This can lead to overheating which may cause irreparable damage to the projector and lamp.
- Within a projector the 'colour tubes' can be cleaned by a professional service.

Costs of this send-away or site-visit service may cost from £60-£100 per projector. It is not recommended that this is attempted by the standard user. This can improve the intensity and colour of aged projectors.

JARGON BUSTER	
Lumens	A measurement of brightness - the higher the number the better
LCD	A type of projector. It refers to how the picture is created inside the projector. This type is the most common with very good colour reproduction
DLP	A type of projector. It refers to how the picture is created inside the projector. This type is low maintenance as it usually has no filters to clean. The picture is not as good generally as an LCD or similar value.
Laser	This is a new technology where the image is no longer dependant on an old fashion bulb. The main advantages are no maintenance and "bulb" life. Normal projectors last for 2000-300- hours. Lasers last for 20,000 on average.
IWB	an abbreviation on Interactive White Board
Lamp	The bulb inside he projector that produces the image
Smartboard	An interactive white board made by Smart
Activboard	An interactive white board made by Promethean
Classboard	An interactive white board made by RM

Things To Watch out for

The Following is a list of things to be watching out for when you are making yours choices. The are ranked in order of speed - ability and longevity.

Red being things to avoid.

Orange is a good short term place to be - but its time to start thinking of changing.

Green will last the longest and you are future proofing yourself as much as possible.

Blue is up and coming breaking technology - it may catch on - it may not !

Original Sanyo class Projectors

DLP Projectors
1500 Lumens Projectors

2000+ Lumens Projectors

Laser Projectors